BBA

Bioenergetics
(including Reviews on Bioenergetics)
Vol. 1057, 1991

Cumulative Contents

Editorial *vii*

Review

The chlorophyll triplet state as a probe of structure and function in photosynthesis
D.E. Budil and M.C. Thurnauer (U.S.A.) 1

Regular Papers

Respiration of pea leaf mitochondria and redox transfer between the mitochondrial and extramitochondrial compartment
S. Krömer and H.W. Heldt (F.R.G.) 42

Reduction of the Q-pool by duroquinol via the two quinone-binding sites of the QH_2: cytochrome *c* oxidoreductase. A model for the equilibrium between cytochrome *b*-562 and the Q-pool
C.A.M. Marres and S. De Vries (The Netherlands) 51

Topological analysis of components of the cytochrome b_6f complex by chemical crosslinking
M.A.-A.M. Shallan, B. Radau, J. Salnikow and J. Vater (F.R.G.) 64

Surface charges, the heterogeneous lateral distribution of the two photosystems, and thylakoid stacking
W.S. Chow, C. Miller and J.M. Anderson (Australia) 69

Changes in the S_0 and S_1 properties during dark adaptation in oxygen-evolving Photosystem-II-enriched thylakoid membranes
M.J. Delrieu and F. Rosengard (France) 78

Bacteriochlorophyll g epimer as a possible reaction center component of heliobacteria
M. Kobayashi, E.J. Van de Meent, C. Erkelens, J. Amesz, I. Ikegami and T. Watanabe (Japan, The Netherlands) 89

Rhodobacter capsulatus nitrogenase reduction by natural in vivo electron carriers: Reactivity with FdI reduced by chloroplasts
P.C. Hallenbeck (Canada) 97

Respiratory nitrate reductase from denitrifying *Pseudomonas stutzeri*, purification, properties and target of proteolysis
S. Blümle and W.G. Zumft (F.R.G.) 102

Effects of low temperature and lipid rigidity on the charge recombination process in *Rps. viridis* and *Rb. sphaeroides* reaction centers
P. Sebban, P. Parot, L. Baciou, P. Mathis and A. Verméglio (France) 109

Infrared spectroscopic signals arising from ligand binding and conformational changes in the catalytic cycle of sarcoplasmic reticulum calcium ATPase
A. Barth, W. Mäntele and W. Kreutz (F.R.G.) 115

The antimycin-A-insensitive respiratory pathway of *Candida parapsilosis*: evidence for a second quinone involved specifically in its functioning
N.M. Camougrand, S. Zniber and M.G. Guérin (France) 124

A picosecond circular dichroism study of photosynthetic reaction centers from *Rhodobacter sphaeroides*
X. Xie and J.D. Simon (U.S.A.) 131

NADH oxidase of liver plasma membrane stimulated by diferric transferrin and neoplastic transformation induced by the carcinogen 2-acetylaminofluorene
D.J. Morré, F.L. Crane, L.C. Eriksson, H. Löw and D.M. Morré (U.S.A., Sweden) 140

Report

Hexokinase bound to rat brain mitochondria uses externally added ATP more efficiently than internally generated ATP
F. Kabir and B.D. Nelson (Sweden) 147

Reviews

Hydrolysis of ATP by F_1 can be described only on the basis of a dual-site mechanism
J.A. Berden, A.F. Hartog and C.M. Edel (The Netherlands) 151

Enzymes depending on the pterin molybdenum cofactor: sequence families, spectroscopic properties of molybdenum and possible cofactor-binding domains
J.C. Wootton, R.E. Nicolson, J.M. Cock, D.E. Walters, J.F. Burke, W.A. Doyle and R.C. Bray (U.K.) 157

Regular Papers

Energy transfer kinetics in chlorosomes from *Chloroflexus aurantiacus*: studies using picosecond absorbance spectroscopy
M. Miller, R.P. Cox and T. Gillbro (Denmark, Sweden) 187

Effect of irradiance level on distribution of chlorophylls between PS II and PS I as determined from optical cross-sections
N.L. Greenbaum and D. Mauzerall (U.S.A.) 195

Separate β subunits are derivatized with ^{14}C and ^{3}H when the bovine heart mitochondrial F_1-ATPase is doubly labeled with 7-chloro-4-nitro [^{14}C]benzofurazan and 5′-*p*-fluorosulfonylbenzoyl[^{3}H]inosine
D.A. Bullough, S. Zhuo and W.S. Allison (U.S.A.) 208

The catalytic role of subunit IV of the cytochrome b_6-f complex from spinach chloroplast
L.-B. Li, Y.-P. Zou, L. Yu and C.-A. Yu (U.S.A.) 215

Disintegration and reconstitution of Photosystem II reaction center core complex. II . Possible involvement of low-molecular-mass proteins in the functioning of Q_A in the PS II reaction center
T. Nagatsuka, S. Fukuhara, K. Akabori and Y. Toyoshima (Japan) 223

Spectroscopic characterisation of the reaction centre of Photosystem II using polarised light: Evidence for β-carotene excitons in PS II reaction centres
W.R. Newell, H. Van Amerongen, J. Barber and R. Van Grondelle (The Netherlands, U.K.) 232

I. Langmuir-Blodgett monolayer films of bacterial photosynthetic membranes and isolated reaction centers: preparation, spectrophotometric and electrochemical characterization
G. Alegria and P.L. Dutton (U.S.A.) 239

II. Langmuir-Blodgett monolayer films of the *Rhodopseudomonas viridis* reaction center: determination of the order of the hemes in the cytochrome *c* subunit
G. Alegria and P.L. Dutton (U.S.A.) 258

Reports

Cytochrome oxidase content of rat brain during development
G.C. Brown, M. Crompton and S. Wray (U.K.) 273

Modification of myosin light chain phosphorylation in sustained arterial muscle contraction by phorbol dibutyrate
A. Rokolya, M. Bárány and K. Bárány (U.S.A.) 276

Review

Enzymic mechanisms of superoxide production
A.R. Cross and O.T.G. Jones (U.K.) 281

Regular Papers

Temperature dependence of the initial electron-transfer kinetics in photosynthetic reaction centers of *Chloroflexus aurantiacus*
M. Becker, V. Nagarajan, D. Middendorf, W.W. Parson, J.E. Martin and R.E. Blankenship (U.S.A.) 299

Stoichiometry of proton release during photosynthetic water oxidation: a reinterpretation of the responses of Neutral red leads to a non-integer pattern
P. Jahns, J. Lavergne, F. Rappaport and W. Junge (F.R.G., France) 313

The relationship between zeaxanthin, energy-dependent quenching of chlorophyll fluorescence, and trans-thylakoid pH gradient in isolated chloroplasts
G. Noctor, D. Rees, A. Young and P. Horton (U.K.) 320

Inhibition of electron transfer from A_0 to A_1 in Photosystem I after treatment in darkness at low redox potential
H. Bottin and P. Sétif (France) 331

Effect of light-induced changes in thylakoid voltage on chlorophyll fluorescence of *Aegopodium podagraria* leaves
H. Dau, R. Windecker and U.-P. Hansen (F.R.G.) 337

Charge separation and formation of bacteriochlorophyll triplets in *Heliobacterium chlorum*
F.A.M. Kleinherenbrink, T.J. Aartsma and J. Amesz (The Netherlands) 346

Characterization of reaction center/antenna complexes from bacteriochlorophyll *a* containing *Ectothiorhodospiraceae*
T. Leguijt and K.J. Hellingwerf (The Netherlands) 353

Protection of the oxygen-evolving Photosystem II complex by glycinebetaine
G.C. Papageorgiou, Y. Fujimura and N. Murata (Japan) 361

Bacteriochlorophyll–protein interaction in the light-harvesting complex B800-850 from *Rhodobacter sulfidophilus*: A Fourier-transform Raman spectroscopic investigation
W. Mäntele, J. Sawatzki, M. Doi, N. Gad'on and G. Drews (F.R.G., Japan) 367

Inhibition of succinate-ubiquinone reductase by nitrosalicyl-*N*-alkylamides
C. Liu, J.-x. Xu, Y. Xiao and L.-q. Gu (China) 373

Electron transport inhibition of the cytochrome bc_1 complex of rat-liver mitochondria by phenolic uncouplers
N. Tokutake, H. Miyoshi and T. Fujita (Japan) 377

Identification of EPR signals from the states $Q_A^{\cdot-}Q_B^{-}$ and $Q_B^{\cdot-}$ in Photosystem II from *Phormidium laminosum*
A.R. Corrie, J.H.A. Nugent and M.C.W. Evans (U.K.) 384

Secondary electron transfer reactions of the isolated Photosystem II reaction centre after reconstitution with plastoquinone-9 and diacylglycerolipids
D.J. Chapman, I. Vass and J. Barber (U.K., Hungary) 391

Flash photolysis studies of manganese-depleted Photosystem II: evidence for binding of Mn^{2+} and other transition metal ions
C.W. Hoganson, P.A. Casey and Ö. Hansson (Sweden) 399

Cumulative Contents, Vol. 1057 407

Author Index 411